

Secretary's Mathematics and Science Initiative
Introductory Statement
Teacher Knowledge Working Group

Goal: All pieces of mathematics teacher education (K-20) must link to create a seamless career experience.

There is evidence from many studies that we do not have a continuous system for teachers that goes from early coursework – clinical experiences – induction – career pathways through ongoing development. The overall goal of the teacher knowledge working group is to create partnerships of professional organizations, mathematics organizations and federal agencies to develop an action plan that the working group believes will result in a more coherent and effective system.

We want a system that produces and sustains teachers that both have deep understanding of mathematics and understand children's thinking. The system will incorporate policy support at all levels so that preservice education, credentialing procedures, professional development programs, and opportunities for teacher leadership are connected.

We want teaching to be viewed as a true profession. Professional teachers must have a sound knowledge of mathematics and a desire to develop the habits of mind required for a rigorous understanding of the level of mathematics they teach. Professional teachers must be aware of and versed in an array of sound pedagogical ideas and methods and should continually study, practice, examine, and compare new and old pedagogical ideas. Professional teachers are informed by research on student learning and implement and continuously experiment with these ideas in the classrooms.

The materials for the May 6 meeting are:

1. Appendices in chart form that summarizes the specific ideas generated on the March 13 Summit follow-up meeting by the four groups on teacher knowledge.
2. A set of possible action strategies (in no particular order and of dissimilar grain size) that grew out of the material in the appendix.

The tasks for the May 6 meeting are to:

1. Review possible action strategies and refine the list.
2. Prioritize the possible action strategies.
3. Flesh out those that the group identifies as most important.
4. Identify the gaps in research that need to be filled.